

FIG. 1A

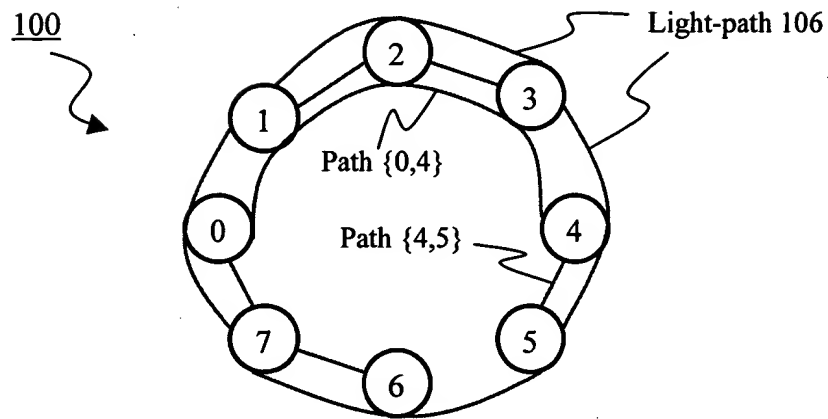


FIG. 1B

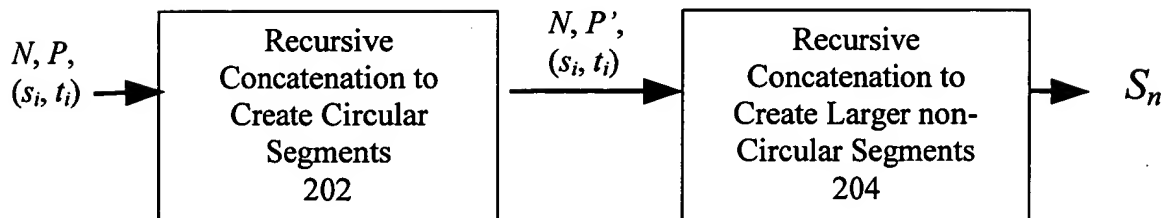


FIG. 2

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graph TD
    302[Search for segment of (k=1) light paths that spans entire ring 302] --> 304{Segment (s) found? 304}
    304 -- Y --> 306[Increment  $S_{CIR}$  306]
    304 -- N --> 310[Increment k 310]
    306 --> 308[Remove light-paths in segment from further processing :  $P'$  308]
    308 --> 310
    310 --> 312{Is k > N? 312}
    312 -- Y --> 314[Search for segment of k light paths that spans entire ring 314]
    312 -- N --> 316[Go to non-circular segment processing 316]
    314 --> 304

```

**FIG. 3**

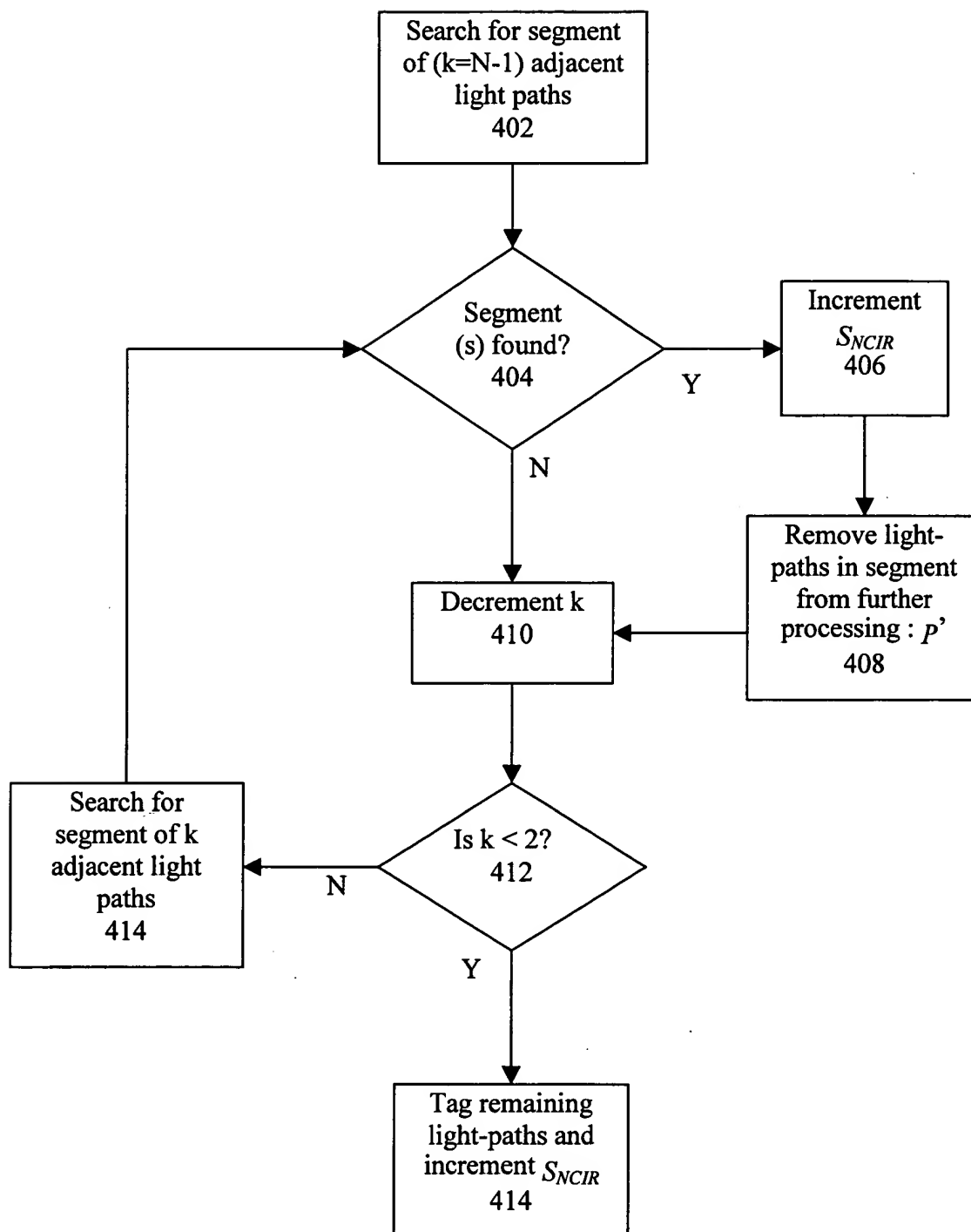
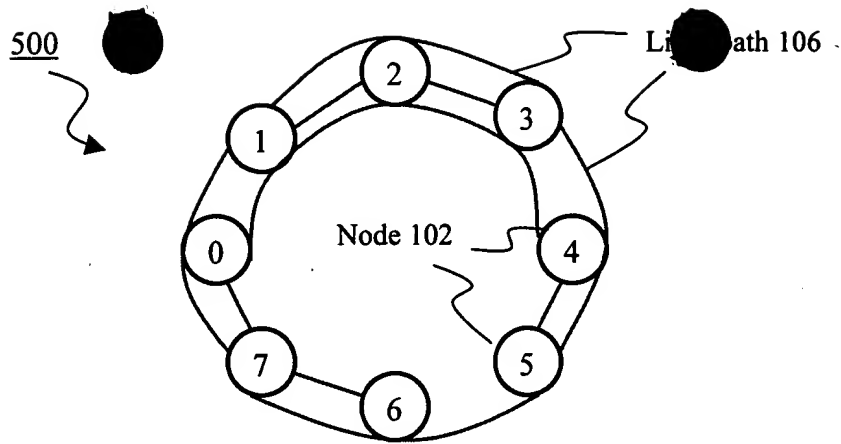
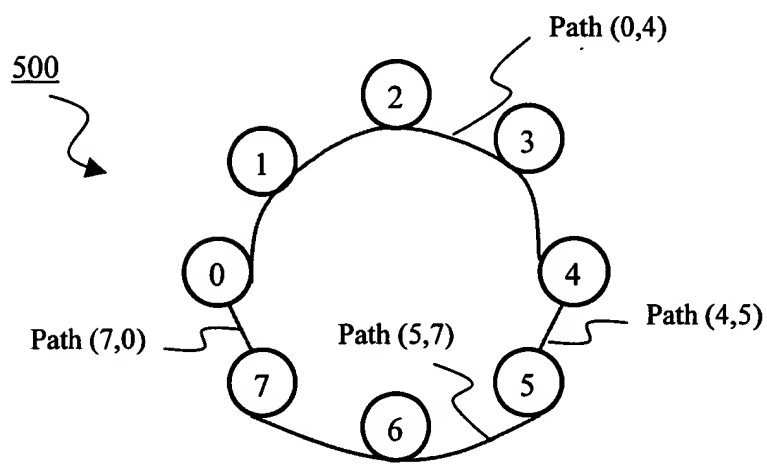


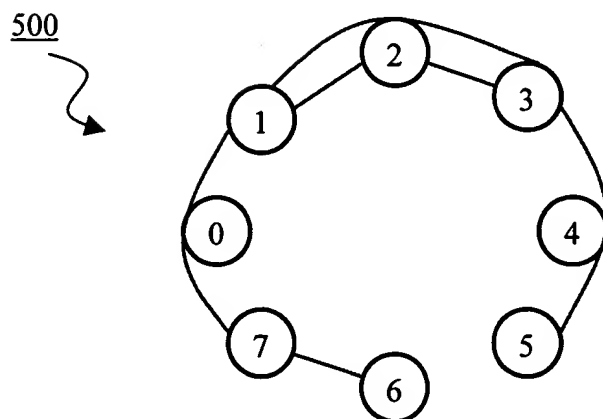
FIG. 4



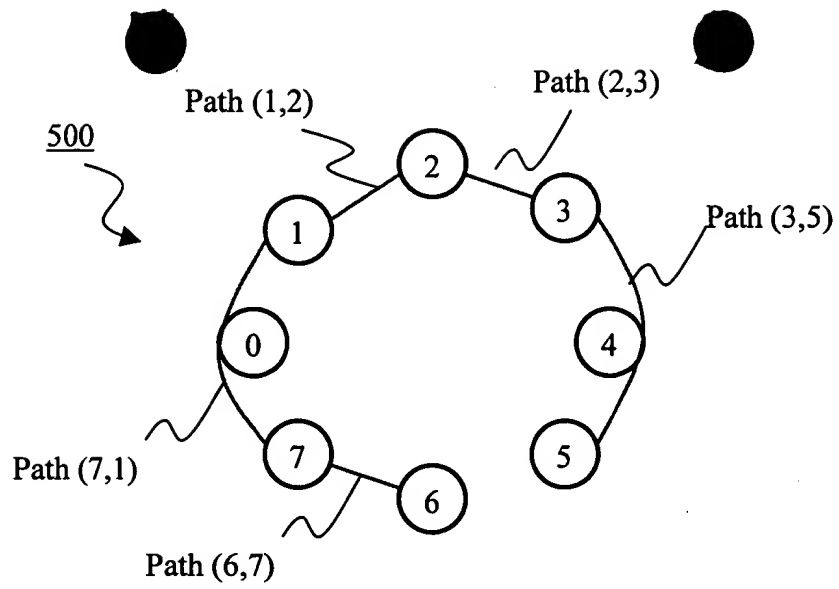
**FIG. 5A**



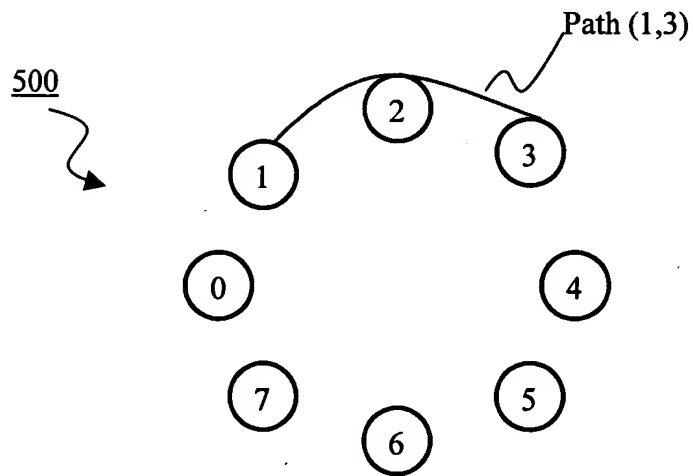
**FIG. 5B**



**FIG. 5C**



**FIG. 5D**



**FIG. 5E**